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# THE SCHOOL REVIEW

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## CO-ORDINATING LATIN WITH OTHER HIGH-SCHOOL SUBJECTS<sup>1</sup>

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Despite the growing demand that the curriculum of the secondary school should come into closer connection with life, and despite the efforts that are being made to meet that demand, it is nevertheless still true that the isolated departments and subjects of our secondary schools are quite generally ignoring the most obvious and immediate opportunity that is presented for such a development. For the teacher of first-year Latin the most direct line of attack through which the Latin work might enter into the very fabric of the pupil's contemporary intellectual life would seem to be to develop to the highest degree of efficiency the capacity of Latin for service in the other branches of his daily work. The capacity of subjects to serve as tools varies greatly. Latin has this capacity to an extraordinary degree. To convert this potential capacity into actual results requires two things, the absence of which will always prove fatal to any attempts in that direction.

There must first be tangible data just as exact as any connected with the more technical part of the Latin work. We cannot hope that valuable assistance can be rendered by first-year Latin in contemporary biology work unless the Latin teacher has an exact list of those derivatives which are of importance in biology and a knowledge of their biological application. Similarly, the study of the

<sup>1</sup> A paper delivered before the New York State Teachers' Association, Syracuse, December 30, 1913.

general derivatives is at present, because of the lack of definite information, haphazard and confined to the more obvious and consequently less important part of the field. Every teacher will readily, on the spur of the moment, think of "viaduct" as a derivative of *via*, but the word "impervious," a more interesting and more important word, will not arise spontaneously. Exact information must be at hand.

In the second place, the work of co-ordinating the Latin with biology, for example, must be shared equally by both departments. The co-ordination must be reciprocal. The teachers of these subjects must be to that extent Latinized. They must be convinced that it will be in the interest of more thorough work and of economy to require the biology pupils, for example, to give the derivation of a technical word which they know the pupil has already met in his Latin class, and which will be remembered much better through a knowledge of its derivation. Each department can then well afford to go out of the technical boundaries of its subject knowing that, as the assistance rendered is mutual, the pupils have in reality made two applications of each fact learned in the Latin class.

It is obvious that my subject forms but one aspect of the pressing problem of co-ordinating our various departments and reorganizing our curriculum into one interrelated and interdependent whole. Into this comprehensive problem I do not now enter. I shall limit my paper to that portion that concerns the study of Latin and describe the progress that we have made in that direction in the East High School of Rochester, New York.

There are several important fields in which, with accurate data and a keen sense of interdepartmental obligations, the Latin work has been made of great value.

- I. *Co-ordination in grammar*.—This field has been carefully worked over, particularly with reference to the English and Latin departments. Our co-ordinating material has been in use for several years and is now in printed form. I have written and spoken elsewhere in full on this topic and will briefly summarize our methods.<sup>1</sup>

<sup>1</sup> *Classical Journal*, VII, 196; *ibid.*, VII, 338; "Introductory Lessons in High-School English and Latin," *Proceedings of New York State Teachers' Association*, 1912.

1. The definite assignment of definite topics to each department to be covered at a specified date at which the material is desired for use in the other departments.
  2. Instruction of such a character that the pupil knows that he will be responsible in the Latin class for what he is studying in the English class and vice versa.
  3. The review in Latin of each topic taught in English and vice versa.
  4. Uniform terminology, which has *followed*, not *preceded*, departmental co-operation.
- II. *Co-ordination in vocabulary*.—In this field the aim has been to make every new Latin word bear its full burden of obligation and realize to the full its capacity for service. This has meant a very exhaustive examination of the pupil's contemporary studies and reading. The selection of data has been correspondingly slow, and is the joint product of the Latin teachers and the teachers of other subjects. The latter have in every case taken the initiative in forming tentative lists.
- The work divides into two general lines.
- A. The study of the non-technical general English vocabulary. This involves close co-ordination with the English Department.
  - B. The study of the technical vocabulary of the special subjects. This includes only the most important words in each subject. Our co-ordination work includes biology, chemistry, physics, mathematics, the business course, and music. I will describe this work in detail.
- A. Co-ordination with the English Department in the study of words.
1. There is a preliminary stage in which the orientation of the pupil is the main aim. The first day in the Latin class is spent in culling from the pupils' previous experience all the Latin words and expressions they have previously met. Such phrases as *terra firma*, *post mortem*, and dozens of others are readily secured. With this list as a clue the pupils are required to search all their English reading, whether newspapers, maga-

zines, or books, for Latin expressions which they quickly develop an ability to recognize. Pupils start notebooks containing as the first section, "Latin Expressions in English," which is later extended to include Latin words in English preserving their original form, e.g., *honor*. Contests are started for the largest number, and clippings or copies are pasted on cardboards which form a tangible object-lesson of the prevalence of actual Latin words in English.<sup>1</sup> These same words are then reviewed in the contemporary English class. There are several valuable results.

- a) The importance of the Latin to the understanding of English is given a laboratory demonstration. This lesson is never forgotten.
- b) The habit of co-ordination begins to form at once, for the pupil discovers that he is held responsible for everything in two classes.
- c) His actual English reading is extended into fields such as editorial writing, with which he was not previously very familiar.
- d) From the purely Latin point of view he gets a knowledge of a not inconsiderable number of Latin words, and more than that he learns on the very first day that the study of Latin is not introducing him into a field wholly foreign to his previous experience, but is only the extension of a topic already familiar to him. Thus one of the most serious impediments to the grasp of Latin is removed. Most important of all, from the very first day he acquires the habit of expecting to find Latin about him, of being constantly on the watch for it and for opportunities to use it. The problem of interest is in great measure solved thereby.

<sup>1</sup> One class recently secured nearly a thousand clippings in the first few weeks. They represented one hundred and fifty different expressions. One pupil's notebook contained at the close of the first term nearly three thousand clippings, representing over four hundred different Latin expressions or English words preserving their original Latin form.

2. When after two or three days pupils have acquired an accurate feeling for an actual Latin word in English, the study of English derivatives is begun.<sup>1</sup> The two principles are established that the English derivative must be related (not identical) in form and related (not identical) in meaning. These principles become of even greater importance later in translation work, when they serve to guard pupils from the pernicious habit of translating Latin words by their English derivatives. The Latin words thus far studied are now examined for their derivatives and all these are incorporated in a second list in the notebook.<sup>2</sup> In each case the pupil writes the derivative, the Latin word from which it comes, the meaning of the Latin word, and the literal meaning of the derivative. Work in derivatives involves just as thorough scholarship as any other part of the work. These words are then reviewed in the English class in a spelling test.
3. After this preliminary work of about two weeks, a comprehensive plan of co-operative study is begun. With the co-operation of Mr. Ernest R. Clark, head of the English Department, we have sought to compile a list of the most significant 5,000 English derivatives from the Latin. This list when entirely complete, will be divided among the four years of high-school work. They are taken up first in the Latin classes in connection with each day's new vocabulary and are then reviewed in the English class. Printed papers are issued to the English teachers week by week, giving the words to be covered each week.

Paper 1 has the following introductory statement:

With this paper you begin a systematic study of the derivation of English words that will continue during your entire English

<sup>1</sup> It will be understood that only a small part of the class time is devoted to this series of topics. I ignore the rest of the work for the present, and abstract only such material from each day's work as bears upon the topic.

<sup>2</sup> The members of the same class mentioned before had an average of over five hundred derivatives so analyzed in their books at the close of the term. The notebook is a laboratory, not a record.

course in high school. The most important element of our English language is Latin, and, as the majority of the pupils study Latin, the work will follow the order of words learned in the Latin classes. Each week you will take up in your English classes the words discussed the previous week in Latin.

This first paper differs from those that follow. It will be simply a spelling test on all the derivatives met so far in Latin. All of them will be met again later and analyzed in detail.

Paper 2 has the following general instructions:

The method of procedure given here is to be followed in the study of all future papers:

1. Observe carefully the meaning of the Latin word.
2. Learn on this basis the real meaning of each derivative and distinguish between synonyms derived from the same source.
3. Observe the assistance rendered in spelling (indicated by the black-face type).
4. Use all these words at your first opportunity, systematically.

Paper 8 is reproduced in full. It shows the plan fully. The following points may be noted:

1. The Latin word is given with its meaning.
2. Simple derivatives like "labor"<sup>1</sup> are included without explanation.
3. More important derivatives, like "agrarian," "danger," are accompanied by a context taken either—
  - a) from general contemporary usage;
  - b) or from the authors read in the English classes.
 Thus the word danger, a derivative of *dominus*, occurs in the original meaning in the 6th chapter of *Ivanhoe*, read by our English classes in the first term.

#### PAPER 8

AGER, field: agrarian=pertaining to fields or farms, "agrarian laws."

AGRICOLA, one who cultivates fields, a farmer: agriculture=cultivation of fields.

AMICUS, friend: amity, "to dwell together in amity"; enmity (*in*=not), "The dislike grew into enmity."

BENE, well: beneficent=doing good, kind, "a beneficent institution"; beneficial=doing good, "beneficial treatment";

<sup>1</sup> No effort is made at this early stage to be exact as to whether "labor" comes from *labor* or *laboro*. This is developed later.

benevolent=wishing well, kindly, "a benevolent disposition"; benefactor=one who does well, "a benefactor of humanity"; benediction=a speaking well, a blessing; benison=same derivation, "Good night and our Lady's benison."

MALE, badly, ill: malevolent=ill wishing, "a malevolent glance"; malefactor=one who does ill, a criminal; malediction=a speaking ill, a curse, "To utter a malediction"; malison=same derivation, a curse.

DOMINUS, master: dominie="Master," the vocative case preserved as an English word; don=a Spanish title "Master"; dominate=to be master, "to dominate the class"; dominant=having mastery, "the dominant party"; domination=mastery; domineer=to play the master, "He domineers over his fellows"; dominion=mastery, authority, "dominion over the sea"; domain=mastery, control, territory controlled, "His broad domains"; danger=mastery, power, then peril; dungeon=mastery, power, then prison, "Spare the dungeon to some Christian who stands in thy danger"; predominant (*prae*=before)=having the mastery before (others), "He exercised a predominant influence."

DONUM, gift: donate=to give, "The society donated ten dollars"; donation=a giving, gift; donor=giver, "The donor of the new art building"; condone (*con*, intensive)=to give completely, to yield, forgive, "to condone a fault"; pardon= (*per*=intensive) to give completely, forgive, "to pardon a crime." (Observe that "forgive" is derived from "give.")

HORTUS, garden: horticulture=cultivation of garden.

LABORARE, work: labor=to work; elaborate=to work out, "to elaborate a theory"; elaborate=worked out, "an elaborate design," i.e., worked out in all details; collaborate=to work with, "to collaborate with another in writing a play"; laboratory=a workshop.

The first 30 papers follow this plan. Paper 31 begins a study of the Greek element in English, contemporaneously with the learning of the Greek alphabet in the Latin classes. The six introductory papers in Greek derivatives are so arranged as to be an introduction to Greek history and are so used the next term. The completed plan will involve 160 papers containing from 30 to 40 words each. One of our greatest difficulties has been the complete absence of any dictionary giving alphabetically the chief Latin contributors to our language followed by all the derivatives from them. Thus there is no



place where one could get a complete list of the derivatives from *dominus* from which to choose the ones desired. We have been compelled actually to construct such a dictionary by a card catalogue made directly from the dictionary, a task of infinite labor.

The results of such a training are manifold and develop consistently with those indicated in the preliminary work.

1. The pupils get a persistent and systematic training in the fundamental habit of co-ordinating newly acquired facts with their contemporary life.

2. They get a good grip on the basic meanings of 5,000 words.

3. By the habit formed of using the Latin they get the ability to solve many thousands more not included in the list.

4. They get daily practical use for their Latin, and thus both strengthen their Latin vocabulary itself through exercise and get an ever deepening insight into the significance of their study of the language.

#### B. Co-ordination with subjects other than English.

1. Biology.<sup>1</sup> Here with the co-operation of Miss Nellie G. Prescott, head of the Biology Department, a list containing the important biological words derived from the Latin has been made up. It is now in use in our first-year classes. The derivation of every word on the list is asked for in both the Latin and the biology classes. The list begins as follows:

Eng. Word	Derivation	Occurrence
accessory	<i>cedere</i> , to go, <i>ad</i> , to = to do to or with, to accompany; e.g., accessory buds or muscles	<i>Cat.</i> i. 19 <sup>2</sup>
adherent	<i>haerere</i> , to stick, <i>ad</i> , to = to stick to, to be united (of parts normally separate)	<i>Cat.</i> i. 13

<sup>1</sup> For the complete biology list see *Classical Journal*, IX.

<sup>2</sup> The references indicate where the word may be found first in our high-school texts. The words are reviewed again at that point.

2. Physics.<sup>†</sup> This was the first list to be completed. Each pupil receives a copy of it at the beginning of the physics course and the procedure is the same as in biology. The list was made up with the co-operation of Mr. Charles E. Harris, head of the Physics Department. It is studied in the third year. The list begins as follows:

Eng. Word	Derivation	Occurrence
aberration	<i>ab+errare</i> =wander from	<i>Cat.</i> ii. 6
acceleration	<i>ad+celerare</i> =to hasten to	<i>Ver.</i> i. 357

3. Music. With the assistance of Miss Eunice Ensor, who is in charge of the music, a list of musical terms derived from the Latin was compiled and is now in use in the music and Latin classes.
4. The lists in chemistry and mathematics have been compiled with the assistance of the heads of these departments, Miss Jane P. Hanna and Mr. William Betz, and are in operation in the Latin classes. They will shortly be put into the classes of the other subjects also.
5. A list has been formed with the assistance of the head of the Commercial Department, Mr. Roy E. Davey, and is now in operation there. This completes the technical lists.

III. *Co-ordination in subject-matter.*—In this field we have done little but sketch out the plan. It involves co-ordination with history and English. In history the report of the committee that has worked on the problem outlined three points of contact. The first involved an agreement as to specific passages in Caesar, Cicero, and Vergil, the historical significance of which the Latin teachers will emphasize and to which the history pupils will be referred as original sources within their reach. The second involves the determination of the main historical lessons to be drawn from Caesar and Cicero and the definite review of this material by the history teachers. The third involves an institution found in comparatively few high schools, a fully developed Roman state. The activities of this organization are used as object-lessons in the history classes.

<sup>†</sup> For the complete physics list see *Classical Journal*, VIII, 6, p. 244.

The co-ordination with English involves an agreement upon a list of books pertaining to Greek and Roman life which all Latin pupils will read and count as part of their prescribed English reading. A tentative list divided among the four years has been made.

Co-ordination must not be confused with correlation in its technical sense. It does not involve the *selection* of subject-matter because the same subject-matter has been used elsewhere. English pupils do not systematically write themes on subjects connected with the Latin or biology. Our work in co-ordination allows each subject to follow its own natural genius, merely insisting that every fact learned in one class should be consciously made use of as apperceptive material when occasion arises to employ that same fact elsewhere. All the territory common to both subjects should be marked out and be perfectly familiar to the teachers of both subjects. Everything in this field should then be taught in each class with distinct recognition of its previous or subsequent appearance in the other.